

AF-subalgebras of a C*-algebra generated by a mapping

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Abstract

In this paper we consider a C*-subalgebra of the algebra of all bounded operators $B(l_2(X))$ on the Hilbert space $l_2(X)$ with one generating element T_ϕ induced by a mapping ϕ of a set X into itself. We prove that such a C*-algebra has an AF-subalgebra and establish commutativity conditions for the latter. We prove that a C*-algebra generated by a mapping produces a dynamic system such that the corresponding group of automorphisms is invariant on elements of the AF-subalgebra. © 2010 Allerton Press, Inc.

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Keywords

AF-algebra, C*-algebra, partial isometry